Landscape of Higher Education: Human Capital

Kelcey Edwards & Ellen Sawtell
College Board Middle States Regional Forum
Brooklyn, NY
February 15, 2013
The Demographic Wave

- Rapid expansion and diversification of graduates
- Regional variation
- Decline in birthrate → drop in mid/late 2020s

The Demographic Wave

Between 1992 and 2028, the percent of US public high school graduates who are Hispanic grows from 8% to 25%.

Regional and state variation in growth

Source: Western Interstate Commission for Higher Education (WICHE), Knocking at the College Door, 2008/2013
Sources: CDC National Center for Health Statistics Monthly Vital Statistics Reports (births); Western Interstate Commission for Higher Education (US high school graduates); NCES Digest of Educational Statistics 2010 (immediate college enrollees); College Board (SAT Examinees in US Cohort)
Trends in CBS Student Characteristics

- Increasingly diverse SAT examinees

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in CBS Student Characteristics

- Increasingly diverse SAT examinees

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in CBS Student Characteristics

- Steady % First Generation in past 10 years

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation - Rank

- Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation - Rank

• Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation - GPA

- Steady rise across groups; persistent gaps

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Trends in Academic Preparation - GPA

• Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation – AP/Honors

- Steady rise across disciplines

Source: College-Bound Seniors 1991-2011 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation – AP/Honors

• Similar, troubling gaps were observed across disciplines

• The difference by race/ethnicity were most notable in:

  • Math
    • In the class of 2011, 48% of Asian examinees indicating taking AP/Honors Math compared to 24% of Black/African American and 30% of Hispanic examinees.

  • Science
    • In the class of 2011, 44% of Asian examinees indicating taking AP/Honors science compared to 23% of Black/African American and 27% of Hispanic examinees.
Trends in Academic Preparation – Calculus

- Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2007 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation – Calculus

- Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2007 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation – Physics

- Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2007 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Trends in Academic Preparation – Physics

- Steady rise across groups; persistent gaps

Source: College-Bound Seniors 1991-2007 Profile Report analyses of self-reported information from the Student Descriptive Questionnaire (SDQ)
Access to Rigorous Courses

- Steady rise across groups; persistent gaps
- Hispanic and white rates are identical
Performance in Rigorous Courses

- Equity & Excellence metric
  - Percent of *graduates* scoring 3 or higher on an AP exam during high school.
  - Found in APRN, OSR, etc.
  - **Not** equivalent to ‘pass rate’ which reflects the percent of *examinees* scoring 3 or higher.
Some thoughts on ‘Pass Rates’

• It’s not that we don’t want to talk about them or aren’t concerned about students who aren’t successful....

• The issue is about interpretation and potential behavior consequences.

  • On a state or national level, they reflects vastly different school/district policies as to who gets into AP, who takes the exam, and how well those students were prepared both prior to and during AP.

  • The easiest way to increase pass rates is to build barriers to entry, as opposed to doing the hard work of making sure that students and teachers have the tools to succeed.

    • It is more efficient/cheaper to decrease the denominator than it is to increase the numerator. Is that good for students?
Performance in Rigorous Courses

AP E&E Rate - US Public Schools

- Total Group
- American Indian
- Asian
- Black/African American
- Hispanic
- White

Years: 2001 to 2011
Who’s knocking at the college door?

- An increasingly diverse and academically prepared student body
  - Also motivated and confident
- This presents substantial challenges and incredible opportunities
Questions?

- Researchers are encouraged to freely express their professional judgment. Therefore, points of view or opinions stated in College Board presentations do not necessarily represent official College Board position or policy.

- Please forward any questions, comments, and suggestions to:
  - Kelcey Edwards – kedwards@collegeboard.org
  - Ellen Sawtell – esawtell@collegeboard.org
Landscape of Higher Education: Net Price

Greg Perfetto
Middle States Regional Forum
February 15, 2013
Federal Mandate took effect October, 2011

First year of data collection completed fall 2012

In accordance with the Higher Education Opportunity Act of 2008 (HEOA), by October 29, 2011, each postsecondary institution that participates in Title IV federal student aid programs must post a net price calculator on its website that uses institutional data to provide estimated net price information to current and prospective students and their families based on a student’s individual circumstances. This calculator should allow students to calculate an estimated net price of attendance at an institution (defined as cost (price) of attendance minus grant and scholarship aid) based on what similar students paid in a previous year. The net price calculator is required for all Title IV institutions that enroll full-time, first-time degree- or certificate-seeking undergraduate students.
Early data from first year under mandate

Broad Representation

- 318 Colleges
- Public, Private, Doctoral, Baccalaureate
- Over 1 Million NPC “hits” since going live.
- Over 500K completed calculations over the recently completed 12 month cycle, yielding detailed information on net cost, as well as family contribution estimates based on both federal and institutional needs analysis.

Preliminary look at affordability landscape
## Who’s coming – By region

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent of Students</th>
<th>Percent of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>10.8%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Middle States</td>
<td>26.1%</td>
<td>27.7%</td>
</tr>
<tr>
<td>South</td>
<td>22.5%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Southwest</td>
<td>4.2%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Midwest</td>
<td>19.1%</td>
<td>16.6%</td>
</tr>
<tr>
<td>West</td>
<td>13.4%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Territories</td>
<td>.2%</td>
<td>NA</td>
</tr>
<tr>
<td>Foreign</td>
<td>3.7%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Top 10 states by student residence:
Virginia, New York, California, Maryland, Pennsylvania, Massachusetts, Illinois, New Jersey, Florida, North Carolina
### Who’s coming – By Income

#### Net Price by Income Band (Public vs. Private, BA and up)

<table>
<thead>
<tr>
<th>Income Band</th>
<th>NET_PRICE</th>
<th>Percent in Income Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>&lt;= $10,000</td>
<td>$12,814</td>
<td>$14,303</td>
</tr>
<tr>
<td>$10,001 - $20,000</td>
<td>$15,640</td>
<td>$15,319</td>
</tr>
<tr>
<td>$20,001 - $30,000</td>
<td>$15,777</td>
<td>$14,975</td>
</tr>
<tr>
<td>$30,001 - $50,000</td>
<td>$16,666</td>
<td>$16,495</td>
</tr>
<tr>
<td>$50,001 - $75,000</td>
<td>$20,607</td>
<td>$20,324</td>
</tr>
<tr>
<td>$75,001 - $100,000</td>
<td>$23,694</td>
<td>$25,451</td>
</tr>
<tr>
<td>$100,001 - $125,000</td>
<td>$25,748</td>
<td>$30,199</td>
</tr>
<tr>
<td>$125,001 - $150,000</td>
<td>$27,383</td>
<td>$35,291</td>
</tr>
<tr>
<td>$150,001 - $200,000</td>
<td>$29,283</td>
<td>$42,809</td>
</tr>
<tr>
<td>$200,001+</td>
<td>$31,895</td>
<td>$49,221</td>
</tr>
<tr>
<td>Total</td>
<td>$21,422</td>
<td>$27,419</td>
</tr>
</tbody>
</table>

*Total N: 125827 (Public) 426853 (Private)*

- Overall, 50% about are middle income students
- More higher than lower income (13% <$10,000 might represent “surfers”)
## Net Price – By College Type

### Cost, Price and Family Contribution (FM) by College Type

<table>
<thead>
<tr>
<th>College Type</th>
<th>NPC Completion Rate</th>
<th>Cost</th>
<th>Net Price</th>
<th>NP/Cost</th>
<th>EFC</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Baccalaureate</td>
<td>82%</td>
<td>$50,827</td>
<td>$25,611</td>
<td>50%</td>
<td>$23,596</td>
<td>159,644</td>
</tr>
<tr>
<td>Private Doctoral</td>
<td>79%</td>
<td>$57,028</td>
<td>$28,888</td>
<td>51%</td>
<td>$25,951</td>
<td>204,784</td>
</tr>
<tr>
<td>Unclassified</td>
<td>73%</td>
<td>$49,572</td>
<td>$27,813</td>
<td>56%</td>
<td>$23,246</td>
<td>21,716</td>
</tr>
<tr>
<td>Private Masters</td>
<td>77%</td>
<td>$43,249</td>
<td>$27,227</td>
<td>63%</td>
<td>$20,296</td>
<td>62,497</td>
</tr>
<tr>
<td>Other Private</td>
<td>75%</td>
<td>$41,048</td>
<td>$26,076</td>
<td>64%</td>
<td>$18,469</td>
<td>13,586</td>
</tr>
<tr>
<td>Public Baccalaureate</td>
<td>69%</td>
<td>$27,335</td>
<td>$17,644</td>
<td>65%</td>
<td>$14,405</td>
<td>4,500</td>
</tr>
<tr>
<td>Public Doctoral</td>
<td>71%</td>
<td>$32,592</td>
<td>$22,246</td>
<td>68%</td>
<td>$20,122</td>
<td>105,231</td>
</tr>
<tr>
<td>Public Masters</td>
<td>71%</td>
<td>$23,429</td>
<td>$17,101</td>
<td>73%</td>
<td>$13,522</td>
<td>16,119</td>
</tr>
<tr>
<td>Other Public</td>
<td>56%</td>
<td>$17,970</td>
<td>$13,767</td>
<td>77%</td>
<td>$11,230</td>
<td>2,238</td>
</tr>
<tr>
<td>For Profit</td>
<td>47%</td>
<td>$36,918</td>
<td>$32,711</td>
<td>89%</td>
<td>$12,424</td>
<td>7,387</td>
</tr>
<tr>
<td>Total</td>
<td>77%</td>
<td>$47,470</td>
<td>$26,155</td>
<td>55%</td>
<td>$22,791</td>
<td>597,702</td>
</tr>
</tbody>
</table>

- Overall, Net Price is about 60 to 80% cost for Publics, 50 to 65% for Privates
- Completion rates (hits to full info) generally runs in the 70-80% range for typical Public and Private 4-yr colleges
• Below $100,000 Public and Private are very similar on Net Price
• Above $100,000 Net Price diverges with Private > Public
• Similar distribution of NPC users across income levels for Public and Private, with slight shift towards higher income for users at Private Colleges
• The peak at <$10,000 likely to be driven by “Surfers”
On average, the expectation for what a family can afford to pay for college in Net Price Estimates appears to be similar at an aggregate level across all income levels for the awarding of federal and institutional money.

### Net Price and family Contributions

<table>
<thead>
<tr>
<th>Income Bands</th>
<th>Estimated Contribution Institutional Funds</th>
<th>Estimated Contribution Federal Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= $10,000</td>
<td>$6,158</td>
<td>$609</td>
</tr>
<tr>
<td>$10,001 - $20,000</td>
<td>$6,862</td>
<td>$1,598</td>
</tr>
<tr>
<td>$20,001 - $30,000</td>
<td>$6,371</td>
<td>$2,189</td>
</tr>
<tr>
<td>$30,001 - $50,000</td>
<td>$6,092</td>
<td>$3,290</td>
</tr>
<tr>
<td>$50,001 - $75,000</td>
<td>$10,618</td>
<td>$8,708</td>
</tr>
<tr>
<td>$75,001 - $100,000</td>
<td>$17,032</td>
<td>$16,988</td>
</tr>
<tr>
<td>$100,001 - $125,000</td>
<td>$24,570</td>
<td>$25,209</td>
</tr>
<tr>
<td>$125,001 - $150,000</td>
<td>$32,963</td>
<td>$33,707</td>
</tr>
<tr>
<td>$150,001 - $200,000</td>
<td>$48,288</td>
<td>$46,510</td>
</tr>
<tr>
<td>$200,001+</td>
<td>$104,520</td>
<td>$94,361</td>
</tr>
<tr>
<td>Total</td>
<td>$28,148</td>
<td>$25,645</td>
</tr>
</tbody>
</table>
Distribution of NPC Users Vs. The Population

- Eliminate Surfers
- Relative to the overall population, NPC usage tends to be over-representative of students from upper-income and very low income families
- Students from Middle-to-lower income families are under-represented

Summary

- Net Price Calculators are in widespread use and provide a pre-application window on families who are concerned about affordability.
- Preliminary information suggests that there is general consensus between public and private colleges on expected family contribution across income levels.
- Current aid policies appear to cancel out public vs. private prices differences for middle to lower income families, however net prices diverge for families making more than $75,000 with private education becoming significantly more expensive.
- NPC Calculators are an important tool for communicating more realistic information about net price – versus “sticker price”. However, the early data suggest that the message is not fully reaching students from very low income families and lower middle-income families, and additional opportunities may exist to reach prospective students in this income range.
Questions

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The Changing Landscape
Postsecondary Pathways

The College Board Middle States Regional Forum
Brooklyn, NY  February 15, 2013

Douglas T Shapiro, PhD
National Student Clearinghouse Research Center
My Goals Today

• A more complex look at transfer students.

• Move beyond what we typically think we know from IPEDS, SLDS, or institutional views of enrollment.

• Better understand the actual enrollment patterns of many students

• Encourage you to start playing “what if” with your own data by linking it with data held by the Clearinghouse.
A Tale of Two Students

Traditional Student

Mobile Student

Retention at Same Institution

Persistence Anywhere
45 Percent of Four-Year Degrees Go to Students with Previous Enrollment in a Two-Year Institution

2010/11 degrees awarded

U.S. Overall = 45%

*Students were considered enrolled at two-year institutions if they had at least one full-time or part-time enrollment at a two-year institution prior to the four-year completion date.
One Quarter of Those Two-Year Enrollments Occurred More Than 5 Years Back

Number of Years Since Most Recent Two-Year Enrollment

2010/11 degrees awarded

- 0-2 Years: 35%
- 3-5 Years: 41%
- 6-10 Years: 19%
- Over 10 Years: 5%
15 Percent of Undergraduate Degrees Go to Students with Previous Enrollment in a Different State

2010/11 degrees awarded

*Students were counted once in each state where they earned a degree between July 1, 2010, and June 30, 2011. Students with any enrollments or degrees from single institutions that span multiple states were excluded from this analysis.

†Includes any enrollment status or degree completion that occurred on or before the 2010-11 graduation date.
Entering cohort of fall 2006

- 2.8 million unique students reported to NSC (full- and part-time)

- 45.1% Two-Year Public
- 34.0% Four-Year Public
- 15.3% Four-Year Private Nonprofit
- 3.3% Four-Year Private For-Profit
- 2.0% Two-Year Private For-Profit
- 0.3% Two-Year Private Nonprofit
Transfer and Mobility Analysis

- Tracked each student for up to five years or first degree
- Identified mobility and transfer:
  - Any change of institution prior to first degree completion
- All enrollment terms, including summer
- Origin institution
- Destination institution
1/3 of Students Enroll in a Different Institution within 5 Years of Their First Enrollment and Before they Earn a Degree

<table>
<thead>
<tr>
<th>Prevalence of Transfer and Mobility</th>
<th>Among All Students in Entry Cohort, Fall 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Transfers</td>
<td>923,196</td>
</tr>
<tr>
<td>Non-Transfers</td>
<td>1,869,765</td>
</tr>
<tr>
<td>Total</td>
<td>2,792,961</td>
</tr>
</tbody>
</table>
That Means *Half* of Each Institution’s Students (on average) Also Enrolled Somewhere Else
Within the Mobile Students group, One-Quarter Moved More Than Once

<table>
<thead>
<tr>
<th>Frequency of Transfer &amp; Mobility, 2006–11</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>688,946</td>
<td>74.6%</td>
</tr>
<tr>
<td>Twice</td>
<td>156,638</td>
<td>17.0%</td>
</tr>
<tr>
<td>Three Times or More</td>
<td>77,613</td>
<td>8.4%</td>
</tr>
<tr>
<td>Total All Mobile Students</td>
<td>923,196</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
27 Percent of All Students Who Changed Institutions Also Crossed a State Line

Institutional Origins of Transfer Students

- **Two-Year Institutions**
  - Public: 330,948
  - Private Nonprofit: 1,699
  - Private For-Profit: 5,377

- **Four-Year Institutions**
  - Public: 242,042
  - Private Nonprofit: 73,010
  - Private For-Profit: 1,427

- **Transferred Out of State**
  - Two-Year: 91,104
  - Four-Year: 82,703

- **Transferred Within State**
  - Two-Year: 802
  - Four-Year: 60,331

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The most common destination was a Two-Year Public Institution: 43% of all transfer and mobility was into a CC.
27% of 4-to-2 Mobility or Reverse Transfer Students Enroll at the 2-Year Institution During Summer Only
The Pathways for Reverse Transfers/Mobility

Enrolled in 2-yr institution during

- Did not return to 4-yr
- Returned to other 4-yr
- Returned to origin institution
6-Year Completion Rates for Reverse Transfer Students Who RETURNED to Original Institution, vs. Never Left

- Public
- Private Nonprofit
- Private For-Profit

- Summer Only & Returned
- Single Regular Term & Returned
- Multiple Regular Term & Returned
- Never Left
Within six years, 12% of the first-time students graduated at a different institution from where they started.
Six-Year Outcomes by Starting Institution

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Not Enrolled</th>
<th>Still Enrolled</th>
<th>Completed at Different Two-Year Institution</th>
<th>Completed at Different Four-Year Institution</th>
<th>Completed at Starting Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four-Year Public</td>
<td>23.4%</td>
<td>16.0%</td>
<td>3.2%</td>
<td>48.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Four-Year Private Nonprofit</td>
<td>18.5%</td>
<td>2.4%</td>
<td>10.0%</td>
<td>58.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Four-Year Private For-Profit</td>
<td>43.3%</td>
<td>13.8%</td>
<td>3.0%</td>
<td>37.8%</td>
<td>100%</td>
</tr>
<tr>
<td>Two-Year Public</td>
<td>43.6%</td>
<td>20.1%</td>
<td>1.9%</td>
<td>3.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Two-Year Private Nonprofit</td>
<td>32.3%</td>
<td>13.5%</td>
<td>3.0%</td>
<td>42.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Two-Year Private For-Profit</td>
<td>29.8%</td>
<td>8.4%</td>
<td>1.2%</td>
<td>58.1%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Percent of Completions at Starting vs. Different Institution

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Percent Completing at Starting</th>
<th>Percent Completing at Different</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four-Year Public</td>
<td>80.3%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Four-Year Private Nonprofit</td>
<td>81.9%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Four-Year Private For-Profit</td>
<td>88.4%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Two-Year Public</td>
<td>65.9%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Two-Year Private Nonprofit</td>
<td>78.5%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Two-Year Private For-Profit</td>
<td>94.1%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>
Bachelors Completions for Two-Year Starters

- **Overall**: 5.6% with Degree/Certificate, 9.4% without
- **Exclusively Full-Time**: 13.5% with Degree/Certificate, 11.7% without
- **Exclusively Part-Time**: 1.3% with Degree/Certificate, 0.7% without
- **Mixed Enrollment**: 3.5% with Degree/Certificate, 9.9% without

- With Degree/Certificate from Two-Year Institution
- Without Degree/Certificate from Two-Year Institution
Some Key Takeaways

• One-third of all students transferred or enrolled elsewhere at least once within five years

• Over one-fifth graduated elsewhere within 6 years

• Transfer and mobility rates were similar for part- and full-time students, public and private nonprofit students

• Of those who transfer:
  – Most prevalent destination was a public two-year (43 percent)
  – One-quarter of mobile students transfer or move more than once
  – More than one-quarter move across state lines (27 percent)
<table>
<thead>
<tr>
<th>Traditional View</th>
<th>Mobile View</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1/2 is hard to forget</td>
<td>• 1/2 is hard to ignore</td>
</tr>
<tr>
<td>• Education as time, place</td>
<td>• Education as career, path</td>
</tr>
<tr>
<td>• Institutional home</td>
<td>• Institutional stepping stone</td>
</tr>
<tr>
<td>• Institutional Graduation rate</td>
<td>• Student Completion Rate</td>
</tr>
<tr>
<td>• How many students complete vs. dropout</td>
<td>• How do institutions bend student trajectories</td>
</tr>
<tr>
<td>• Fear the data</td>
<td>• Free the data</td>
</tr>
</tbody>
</table>
Final Comments

• For public policy makers
  – Without complete information on student enrollment pathways it is impossible to develop policies that will lead to desired outcomes.

• For institutional policy makers
  – Sound enrollment management demands a clear understanding of the enrollment pathways of your students, including before and after your institution.
  – Student outcome metrics should measure all student outcomes
Thank You

Research Center Snapshots and Reports:
http://research.studentclearinghouse.org/

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The College Completion Agenda

From “Education for Education’s Sake” to Return on Investment and Gainful Employment

Patrick J. Kelly

National Center for Higher Education Management Systems
Why ROI and Gainful Employment?

• State policymakers are realizing they can’t afford to reach the postsecondary goals they are targeting under “business as usual” scenarios.

• Beyond the Federal concern about Pell grants and loan repayment, the economic recession has led many state policymakers to heightened awareness of the mismatch between the graduates being produced (and their skills) and employer demand.
Return on Investment
The Personal and State Returns if Each State Produced an Additional 100 Undergraduate Certificates, 100 Associate Degrees, and 100 Bachelor’s Degrees

Additional Annual Personal Income Generated

Additional Annual State Revenues Generated

High Personal Gain, Low State Revenues Gain

High Personal Gain, High State Revenues Gain

Low Personal Gain, Low State Revenues Gain

Low Personal Gain, High State Revenues Gain

Additional Annual State Revenues Generated
Calculating the Economic Value of Increasing College Credentials by 2025
United States

Set Postsecondary Performance Goals for Year 2025

### Increase College Access

- **High School Graduation Rate**: 87.0%
- **College-Going Rate Directly from High School**: 75.0%
- **2010 39 Year Olds Enrolled in College**: 2.40%

### Increase Number of College Credentials

- **Public Research**: 26.0
- **Public Bachelor's and Master's**: 24.4
- **Public Two-Year**: 42.7
- **Private Colleges**: 37.2

### Change Enrollment Patterns of Additional First-Time Students

- **Directly from High School**
  - Public Research: 24%
  - Public Bachelor's and Master's: 18%
  - Public Two-Year: 34%
  - Private Sector: 25%

- **20 to 39 Year Olds**
  - Public Research: 3%
  - Public Bachelor's and Master's: 5%
  - Public Two-Year: 62%
  - Private Sector: 30%

### Optional: Set 2025 College Attainment Goal (%)

- **60.0**

  (Current College Attainment of 25 to 64 Year Olds is 36.3%)

- **Gap: Additional Degrees Needed to Meet**: 24,305,885

### Results: Additional Undergraduate Credentials Awarded by 2025

- **Associate's**: 12,412,476 + **Bachelor's**: 12,002,697

  = **Additional Degrees**: 24,415,173

- **Undergraduate Certificates**: 7,851,437

- **Total Additional Undergraduate Credentials**: 32,266,610

### Additional Undergraduate Credentials Awarded Annually

- [Bar graph showing the annual increase in credentials from 2011 to 2025]

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**Note:** The default positions reflect current rates and values. The results in 2025 assume linear progress toward goals.

Created by NCHEMS and CLASP
Calculating the Economic Value of Increasing College Credentials by 2025
United States

Change in Personal Income per Capita
In Current $

Additional State Revenues Generated
In Current $

Additional Revenues Generated
In Current $

State and Federal Costs vs Revenues Generated
In Current $

Note: The default positions reflect current rates and values. The results in 2025 assume linear progress toward goals.

Created by NCHEMS and CLASP
Gainful Employment
Environmental Pressures

- Federal Gainful Employment
- Effective utilization of federal SLDS grants
- College attainment/completion goals – state retention of graduates and economic returns
- Increased focus on “credentials of value” – the attainment of credentials of less than two-years in length (primarily) that yield living/competitive wages
- Meeting employment demand in key areas – e.g. health, education, STEM, trades
- Increasing need for employment outcomes data to make the case for continued investment (state and federal policymaking environments)
The Data are Simple

**Institution Records**
- Completions
- Level of Award (Certificate, Associates, Bachelor’s Masters, Doctorate, Professional)
- CIP Code of Award – Field of Study
- Origin of Student
- Continued Enrollment

**Employment/Wage Records**
- Employed – record in the database (excludes self employed, military, and employed out-of-state)
- Earnings
- Industry of Employment
- Region of Employment

**Data Available by Term**
- Link SSN

**Data Available Quarterly**
Major Questions Answered

• What percentage of the graduates are employed in-state – by level and type of award?

• Are the graduates employed in the region in which they graduate?

• What are their quarterly earnings?

• What industries are the employed in? (only relevant in a few fields)

• What percentage continue to enroll/persist in postsecondary education?
Most Effective Uses of the Data

• **State brain drain.** Is the state retaining the graduates it produces? How is it changing over time? (the impact on the degree and attainment goals of the state).

• **State-level supply and demand.** What is the employment status of graduates in key areas of demand for the state? E.g. health and STEM fields, certain trades. Don’t fall into the trap of overly detailed program-to-occupation supply and demand studies.

• **Regional supply and demand.** Are institutions producing graduates that meet local employer needs? What are the employment status and wages of the graduates they produce?

• **Information for students and families.** What programs provide the highest wages in the short-run? What programs are more likely to require continued education upon completion?
Institutional Accountability (Difficult)

• Small numbers of graduates for many programs

• It is very difficult to calculate the “value added” by institution – i.e. the likely employment and wages of students had they not completed their college credentials

• The state economy treats graduates from some institutions better than graduates from others (with the same credentials) – the “prestige” factor

• Institutions serving large numbers of place-bound students are victims of their local economy (e.g. a part of the state that has low wages relative to other parts of the state)

• The difficult balance between directing students into programs with competitive wages and providing student choice
Median Annual Wages by General Field of Study and Age (United States)
(Includes Only Bachelor’s Degree Holders, Not Residents Who Earned Graduate/ Professional Degrees)

STEM
Health
Business and Communications
Psychology and Social Sciences
Liberal Arts
Education

Source: U.S. Census Bureau, 2010 American Community Survey (Public Use Microdata Sample)
How Can We Tell a Story with the Data?
Many Students Re-Enrolled Following Completion

Percentage of 2005-06 Completers Who Continued to Enroll the Following Year

- Business and Com: 51.7%
- Health: 56.6%
- Soc and Beh Sciences: 62.2%
- STEM: 44.8%
- Trades: 41.8%

- Business and Com: 25.2%
- Health: 33.6%
- STEM: 16.7%
- Trades: 24.0%

- Arts and Humanities: 56.8%
- Business and Com: 29.4%
- Health: 11.0%
- Soc and Beh Sciences: 45.2%
- STEM: 33.7%
- Trades: 31.4%

Blue bars represent Certificates (Less than 1 Year), red bars represent Certificates (1 Year, Less than 2 Years), and green bars represent Associate Degrees.
Of Those Who Didn’t Re-Enroll, How Many are Employed in State?

Percentage of 2005-06 Completers Who Employed the Following Year

- **Business and Com**: 74.1%
- **Health**: 82.1%
- **Soc and Beh Sciences**: 77.1%
- **STEM**: 77.3%
- **Trades**: 73.7%
- **Business and Com**: 61.6%
- **Health**: 87.4%
- **STEM**: 60.0%
- **Trades**: 68.0%
- **Arts and Humanities**: 78.3%
- **Business and Com**: 80.2%
- **Health**: 87.8%
- **Soc and Beh Sciences**: 82.6%
- **STEM**: 77.8%
- **Trades**: 82.8%

- Certificates (Less than 1 Year)
- Certificates (1 Year, Less than 2 Years)
- Associate Degrees

(NCHEMS)
What are Their Median Annual Wages One Year After Completion?

Median Annual Wages of 2005-06 Completers the Following Year

<table>
<thead>
<tr>
<th>Field</th>
<th>Certificates (Less than 1 Year)</th>
<th>Certificates (1 Year, Less than 2 Years)</th>
<th>Associate Degrees</th>
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<tr>
<td>Business and Com</td>
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<td>$20,316</td>
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<td>$32,305</td>
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<td>$34,478</td>
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Median Annual Wages of Working Adults with Just a High School Diploma ($16,122)
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<thead>
<tr>
<th>Field</th>
<th>Certificates (Less than 1 Year)</th>
<th>Certificates (1 Year, Less than 2 Years)</th>
<th>Associate Degrees</th>
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<td>Soc and Beh Sciences</td>
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## Making the Case for the Graduating Cohort of 2005-06

<table>
<thead>
<tr>
<th>Field of Completion</th>
<th>Employed Five Years Following Graduation</th>
<th>Median Annual Earnings</th>
<th>Total Personal Income Generated Above the High School Median Wage</th>
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</thead>
<tbody>
<tr>
<td>Business and Com</td>
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<td>179</td>
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</tr>
<tr>
<td>Trades</td>
<td>159</td>
<td>154</td>
<td>150</td>
</tr>
</tbody>
</table>

**Employed Over the Five Year Period**

**Median Earnings Over Five Years**

**Total Personal Earnings Above a High School Wage ($16,122)**

Total Additional Earnings Generated Over the Five Years = $438,756,988
Making the Case for the Graduating Cohort of 2005-06

Total Additional Earnings Over Last Five Years = $438,756,988

Additional State Tax Revenues Generated = $68,536,366

- Income Tax $37,818,493
- Property Tax $8,471,451
- Sales Tax $22,246,422

Savings to the State = $25,707,910

- Medicaid $20,078,941
- Corrections $5,628,969

Total Revenues and Savings to the State = $94,244,276